Requirements for the MS in Environmental Toxicology

(for students entering autumn 2020 or later)

DEOHS Core Requirements		
BIOST 511	Medical Biometry I [A]	4
EPI 511	Introduction to Epidemiology [A]	4
ENV H 501	Foundations of Env. & Occ. Health [A]	4
ENV H 502	Assessing & Managing Risks from Human Exposure to Env. Contaminants [W]	4
ENV H 580	Env. & Occupational Health Seminar [A,W,Sp]	1+1+1=3[1]
ENV H 583	Thesis Research Proposal Preparation [Sp]	1(+2)[2]
	Minimum Credit Subtotal	**20**
Degree Option Specific Requirements		
ENV H 514	Fundamentals of Toxicology [A]	3
ENV H 515	Organ System Toxicology [W]	3
ENV H 516	Toxic Agents: Effects and Mechanisms [Sp]	3
ENV H 591	Current Topics in Toxicology [A,W]	2-4[3]
ENV H 593	Current Topics in Risk Assessment [A,W,Sp]	2-4[3]
ENV H 600	Independent Study or Research [E]	9
Chose two (6 credits):		
ENV H 531	Neurotoxicology [W, even years]	(3)
ENV H 532	Reproductive and Dev. Toxicology [W, odd years]	(3)
ENV H 533	Molecular Toxicology [A]	(3)
ENV H 534	Biochemical Toxicology of the Puget Sound [*]	(3)
ENV H 577	Risk Assessment for Env. Health Hazards [A]	(4)
	Minimum Credit Subtotal	**30**
Culminating Experience		
ENV H 700	Master's Thesis [E]	9
Electives		
TBD	Additional elective credits as needed to reach total minimum of 63 credits[4]	Var.
	Total Minimum Credits =	**63**

1. ENV H 580: Students are required to complete 3 quarters of this 1-credit course for a total of 3 credits.
2. ENV H 583 requires that students take 2 credits of either ENV H 700 (Thesis Preparation) or 600 (Independent Study) concurrently. If ENV H 700 is taken as part of this requirement, those 2 credits can count towards the minimum 9 credit ENV H 700 requirement.
3. A total of 6 credits of ENV H 591 and ENV H 593 together is required.
4. Students select ENV H electives in consultation with their faculty advisor. Non-ENV H electives will be approved on a case-by-case basis.

[A] = Typically offered in autumn quarter
[W] = Typically offered in winter quarter
[Sp] = Typically offered in spring quarter
[S] = Typically offered in summer quarter
[E] = Available every quarter

Degree Competencies for the MS in Environmental Toxicology

SPH/CEPH – Foundational Public Health Knowledge Learning Objectives

Profession & Science of Public Health

1. Explain public health history, philosophy and values
2. Identify the core functions of public health and the 10 Essential Services
3. Explain the role of quantitative and qualitative methods and sciences in describing and assessing a population's health
4. List major causes and trends of morbidity and mortality in the US or other community relevant to the school or program
5. Discuss the science of primary, secondary and tertiary prevention in population health, including health promotion, screening, etc.
6. Explain the critical importance of evidence in advancing public health knowledge

Factors Related to Human Health

7. Explain the effects of environmental factors on a population's health
8. Explain biological and genetic factors that affect a population's health
9. Explain behavioral and psychological factors that affect a population's health
10. Explain the social, political and economic determinants of health and how they contribute to population health and health inequities
11. Explain how globalization affects global burdens of disease
12. Explain an ecological perspective on the connections among human health, animal health, and ecosystem health (e.g., One Health)

DEOHS All Graduate Student Degree Competencies

1. Apply the major components of the environmental and occupational health framework (problem formulation, hazard identification, dose-response assessment, exposure assessment, risk characterization, risk communication, risk management, evaluation, stakeholder engagement, and research) in order to address environmental public health problems experienced in the community or work environment.
2. Use epidemiological and statistical techniques to describe and analyze environmental and occupational health data
3. Formulate hypotheses and design and conduct experiments to test such hypotheses aimed at advancing knowledge in environment and occupational health sciences

DEOHS Degree-Specific Competencies – MS-ET

1. Define the major classes of toxicants present in the environment and the workplace and describe their sources, pathways, and routes of exposure
2. Describe and analyze how toxicants interact with biological systems and the mechanisms by which they elicit adverse effects in humans and other organisms
3. Explain the core principles of research ethics and apply these principles to specific research projects